

## REMARKS

### I. STATUS OF CLAIMS

In accordance with the foregoing, claims 1-5 and 8-16 are pending and under consideration.

### II. REJECTION OF CLAIMS 1-5 UNDER 35 U.S.C. 103(A) AS BEING UNPATENTABLE OVER US PATENT 5,208,692 (MCMAHON) IN VIEW OF US PATENT 6,754,411 (AHMADVAND ET AL.)

McMahon discloses a network interconnection architecture, which is used to connect a plurality of grouped nodes. Ahmadvand et al. discloses a WDM demultiplexer, which is achieved by cascading a plurality of Mach-Zehnder Interferometers.

Amended claim 1 recites "when the physical branch ports formed by cascade connecting the optical multiplexing/demultiplexing is M ( $M > N-1$ ), said branch port connecting section groups two or more branch ports of said M branch ports, and virtually considers these as N-1 branch ports outputting one of even-numbered or two odd-numbered wavelength groups, and connects between each of the branch ports."

It is respectfully submitted that McMahon and Ahmadvand et al. both fail to teach or suggest "said branch port connecting section groups two or more branch ports of said M branch ports, and virtually considers these as N-1 branch ports outputting **one even-numbered and two odd-numbered wavelength groups, and connects between each of the branch ports.**"

Although the above comments are specifically directed to currently amended claim 1, it is respectfully submitted that the comments would be helpful in understanding various differences of various other claims over the cited references.

Accordingly, it is respectfully submitted that neither McMahon nor Ahmadvand et al teach or suggest the multi-directional optical branching apparatus of amended claim 1.

Claims 2-5 depend on independent claim 1 and include of all of the features of the claim, plus additional features which are not taught or suggested by the prior art and therefore are patentably distinguishable.

In regards to claims 4 and 5, the Examiner admitted that McMahon did not expressly disclose that the optical multiplexing/demultiplexing device used WDM couplers and optical interleavers.

On page 11 of the Action the Examiner has, in part, based the rejections on allegations that the features of the invention are based on design choice. Design choice is a choice between two alternatives that will make no difference to the functioning of the invention. That is, one choice over another provides no advantages. It is submitted that the feature of the coupler

or interleaver and recited in claims 4 and 5 provides the advantage of separating and combining wavelengths over other choices. That is, the coupler or interleaver is a significant limitation that provides beneficial advantages over the prior art and is a feature not taught or suggested by the prior art.

An assertion that the modification or feature is an obvious matter of design choice is an unsupported conclusion and not a valid basis for the rejection of a claim (see *In re Garrett*, 33 BNA PTCJ 43 (U.S.P.T.O.Bd.App.Nov. 13, 1986)).

#### **OBVIOUSNESS: DESIGN CHOICE**

To set forth a *prima facie* obviousness case, evidenced motivation must be provided indicating why one skilled in the art would be motivated, lead, or suggested to modify an existing reference in view of another reference. In addition, it is also improper to base a rejection on the claimed feature being merely a design choice. See *In re Garrett*, 1986 Pat. App. LEXIS 8 (Bd. Pat. App. 1986), where the U.S. Patent and Trademark Office Board of Patent Appeals and Interferences ("Board") specifically stated: "the examiner has not presented any line of reasoning as to why the artisan would have been motivated to so modify the...structure, and we know of none. The examiner's assertion...that the proposed modification would have been "an obvious matter of engineering design choice well within the level of skill of one of ordinary skill in the art" is q conclusion, rather than a reason." Similar discussions can be seen in *In re Chu*, 36 USPQ2d 1089 (Fed. Cir. 1985).

#### **III. REJECTION OF CLAIMS 8-15 UNDER 35 U.S.C. 103(A) AS BEING UNPATENTABLE OVER US PATENT 5,208,692 (MCMAHON) AND US PATENT 6,754,411 (AHMADVAND ET AL.) AS APPLIED TO CLAIM 1 ABOVE, AND IN FURTHER VIEW OF US PATENT 2003/0058497 (PARK ET AL)**

Claims 8-15 depend, directly or indirectly, from independent claim 1 and include all of the features of the claim, plus additional features which are not taught or suggested by the prior art and therefore are patentably distinguishable. Furthermore, nothing has been cited or found in Park et al. which cures the deficiencies in regards to McMahon in view of Ahmadvand.

#### **IV. New Claim**

New claim 16 emphasizes "M (M>N-1) physical branch ports are formed by cascade connecting an optical multiplexing/demultiplexing device, said branch port connecting section groups two or more branch ports of said M branch ports, and virtually considers these as

N-1 branch ports outputting at least three wavelength groups, and connects between each of the branch ports."

Neither McMahon, Ahmadvand et al, nor Park et al. teach or suggest the branch ports outputting at least three wavelength groups. It is submitted that this new claim, which is different and not narrower than the prior filed claims, is supported in the specification and distinguishes over the prior art.

## CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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